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**NATIONAL STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

GB/T 33219-2016

Imperfections in brazed joints

硬钎焊接头缺欠

(English Translation)

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Foreword

This standard is drafted in accordance with the rules given in GB/T 1.1-2009.

This standard uses the re-drafting method to modify ISO 18279.:2003 "brazing brazed joint defects" (English version).

The technical differences between this standard and ISO 18279.:2003 are as follows.

- deleted Figure 1 in ISO 18279.:2003;
- Added revision GB/T 33148 "brazing terminology" using ISO 857-2.:2005 for ease of application (see Chapter 2);
- the symbols in ISO 18279.:2003 are deleted and Figure 2, which is not directly related to the lack.

This standard has also made the following editorial changes.

- Change the standard name to "brazed joint defect".

This standard is proposed by the National Welding Standardization Technical Committee (SAC/TC55).

The main drafting of this standard. Zhengzhou Institute of Machinery, Harbin Institute of Technology, Institute of Mechanical Science and Technology Harbin Institute of Welding, China Aviation Industry Group Beijing Aeronautical Materials Research Institute, Changshu Huayin Solder Co., Ltd., Hangzhou Huaguang Welding New Material Co., Ltd.

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1 Scope

This standard specifies the classification and description of the brazed joint defects.

This standard applies to the identification of various types of brazing defects in brazed joints.

2 Normative reference documents

The following documents are indispensable for the application of this document. For dated references, only the dated edition applies to this article. For undated references, the latest edition (including all modifications) applies to this document.

GB/T 33148 brazing terminology (GB/T 33148-2016, ISO 857-2.:2005, MOD)

3 Terms and definitions

GB/T 33148 Definitions and the following terms and definitions apply to this document.

Brazing lack of brazing imperfection in the brazed joints due to brazing the metal is not continuous, not dense, irregular, poor connection and shape or size deviation phenomenon.

Referred to as "lack of".

4.1 Overview

The deficiency is divided into the following six groups.

- group I crack;
- group II cavities;
- III group solid inclusion;
- group IV combination of defects;
- V group shape and size of the lack of;
- VI group other deficiencies.

Defects can be identified by code.

Each defect can be subdivided into external deficiencies and internal deficiencies according to their location.

4.2 External deficiencies

Brazing joints External defects include.

Not filled

---crack;

The surface is not complete loose;

--- incomplete brazing angle;

--- excessive lap;

Local melting